

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) Method for controlling ~~the~~ a spatio-temporal uniformity of a pulsed gas laser beam, in which a pulsed electric discharge is brought about in a gas between two electrodes ~~spaced apart (101, 102)~~ and an X-ray preionisation beam (104) is applied to ~~this~~ the gas, ~~wherein an whose axis of the X-ray preionisation beam~~ is substantially in alignment with ~~that an axis of the electric discharge, characterised in that the method comprising:~~

producing a lateral intensification of the an electric field is produced in the space between the two electrodes in order to stabilise the electric discharge in time and space[[,]]; and

in that generating an axial intensification of the X-ray beam is produced in order to compensate for the modifications of the an uniformity of the electric discharge resulting from this the lateral intensification of the electric field by a progressive mask.

2. (Currently amended) ~~Laser for carrying out the method according to claim 1, characterised in that it comprises~~ Pulsed gas laser comprising:

two electrodes adapted to support a pulsed electric discharge brought about in a gas therebetween; and

a mask for applying an X-ray preionisation beam to the gas, the X-ray beam having an axis substantially in alignment with an axis of the electric discharge, wherein at least one electrode (101) which of the two electrodes is profiled in order to comprise two raised lateral portions (111, 121) which allow the a lateral intensification of the electric field to be obtained in this a region between the two lateral portions, wherein said mask is a progressive mask relative to the X-ray beam to progressively attenuate from a center of the electric discharge to edges

thereof the X-ray preionisation beam to compensate for lack of uniformity of the electric discharge resulting from the intensification of the electric field at the edges thereof.

3. (Currently amended) Laser according to claim 2, ~~characterised in that the~~ wherein a height of the raised lateral portions (111, 121) is substantially in the order of one hundredth of the a distance between the two electrodes ~~(101, 102).~~

4. (Currently amended) Laser according to either claim 2 or claim 3, ~~characterised in that~~ wherein the two electrodes (101, 102) are profiled ~~in order to~~ obtain the lateral intensification of the electric field.

5. (Canceled)

6. (Currently amended) Laser according to claim 2 ~~5,~~ characterised in that wherein the progressive mask (103) is formed by a plate which absorbs the X-rays and ~~whose having a~~ thickness ~~is reduced~~ progressively from ~~the~~ locations opposite to the two raised lateral portions (111, 121) ~~where the an~~ absorption of the X-rays is at a maximum as far as a central portion where the absorption is substantially zero.

7. (Currently amended) Laser according to ~~either~~ claim 2 ~~[[5]]~~ or claim 6, ~~characterised in that wherein~~ the progressive ~~nature of the~~ reduction in the thickness of the plate (103) which absorbs the X-rays ~~allows the is~~ configured to allow a profile of ~~the an~~ absorption curve (106) of the X-rays to be adapted to the a profile of the variation of the electric field between ~~these the~~ two lateral intensifications.

8. (Currently amended) Laser according to ~~either~~ claim 2 ~~[[5]]~~ or claim 6, ~~characterised in that wherein~~ the plate (103) which absorbs the X-rays is reduced in thickness in accordance with two substantially linear ramps (113, 123) which extend from one of ~~the~~ surfaces thereof in the region of the edges of the electric discharge ~~in order to~~ open at ~~the other another~~ surface, with a central hole (133) being defined configured which corresponds to ~~the a~~ maximum transmission.

Appln No. 10/552,500
Amdt date January 28, 2008
Reply to Office action of October 1, 2007

9. (Currently amended) Laser according to claim 2, ~~characterised in that it~~ wherein the
laser is of the excimer type.